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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/703,723	11/02/2000	Srithar Ramesh	219.39043X00	2135

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EXAMINER	
BETTENDORF, JUSTIN P	

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 01/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/703,723	RAMESH, SRITHAR	
	Examiner	Art Unit	
	Justin P. Bettendorf	2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 October 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/11/02 has been entered.

Claim Rejections - 35 USC § 102/103

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Claims 1 and 9 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Vince (of record).

The Vince reference discloses in figure 2 a circuit for removing noise on a voltage input line including: ferrite bead 109, which inherently has a resistance because all ferrites have some electrical resistance; and a bulk ceramic capacitor 107-1 (which inherently has a low ESR because all ceramic capacitors have a "low" ESR) connected between the output of the ferrite bead 109 and ground. With respect to claim 9, the Vince reference clearly indicates regulated voltages in figure 2 at input 102 and discloses that it is produced by switching (see col. 2, lines 65-66).

Alternatively, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a low ESR capacitor because such a modification would have

advantageously increased noise dissipation of high frequency noise, as would have been well known.

Claim Rejections - 35 USC § 103

4. Claims 1-3, 5-7, 9-11, 13-15, 17, 19, 21, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinciarelli et al. United States Patent No. 5,088,016 in view of Vince.

The Vinciarelli et al. discloses in figure 7 a switching regulated voltage supply module 110 for an electronic system (see col. 1, lines 5-30) that teaches using an "L-type" noise filter with output inductor 80 (i.e., at the regulated output - see col. 8, lines 47-50 which is disclosed as being external to the converter module - see col. 4, lines 19-21) and capacitor 160 to remove the switching noise (col. 1, lines 47-56). The reference further discloses that a low ESR tantalum capacitor should be used to reduce deviation of the regulated voltage output (see col. 20, lines 23-33). However, the reference does not disclose a ferrite bead.

As noted above, the Vince reference discloses a ferrite bead that inherently has resistance that filters high frequency noise in conjunction with a grounded capacitor 107-1.

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted the art-recognized equivalent ferrite bead of Vince in place of the generic inductor 80 (Lo) in the circuit of Vinciarelli et al. because, as the Vinciarelli et al. reference is silent on the exact specifics of the inductor, any art-recognized equivalent inductor would have been usable therewith such as the well-known ferrite bead with its inherent resistance. With respect to "D" case, it should be noted that the "D" case is the used extensively throughout the computer industry, which is the implied use of the high speed electronic systems

of Vinciarelli et al. Therefore, use of the "D" case would have been obvious because the reference is silent on the case used, any art-recognized equivalent would have been usable such as the conventional "D" case.

With respect to an ESR of 0.8 Ohms, it should be noted that such a value would have been considered a mere optimization because determining the value of the workable range only involves routine skill in the art based on a result-effective variable.

With respect to claim 13 "for a clock circuit" is considered a statement of intended use and is given no patentable weight. Moreover, the combination is fully capable of providing a voltage for a clock circuit (see MPEP 2111.02)

5. Claims 4, 8, 12, 16, 18, 20, 22, and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vinciarelli et al. in view of Vince as applied above, and further in view of Pavlovic (of record).

As noted above, the Vinciarelli et al. and Vince combination discloses an "L" type output filter that includes a ferrite bead but does not disclose that the ferrite bead has a resistance of 0.3 Ohms.

The Pavlovic reference discloses in figure 3 a ferrite bead 20 that is conductive to attenuate certain lower high frequencies (e.g. 1 MHz - see col. 1, lines 23-25 and col. 3, lines 27-30).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time of the invention to have substituted conductive ferrite as taught by Pavlovic in place of the generic ferrite in the bead of Vinciarelli et al./Vince because, as the Vinciarelli et al./Vince combination

is silent on the exact type of ferrite used, any art-recognized equivalent ferrite would have been usable such as the conductive ferrite of Pavlovic, which would have provided the advantage of increased attenuation at lower high frequencies (e.g. 1 MHz).

With respect to the resistance of the ferrite being 0.3 Ohms, this value would have been considered an optimization involving routine skill because the resistance is a result-effective variable.

With respect to forming a resistor-divider network, it should be noted that the Vinciarelli et al. reference clearly shows in figure 14 that the ESR 163 of the capacitor Ce are in series, thereby forming one "leg" of a divider network with the inductor 80 (figure 7). Because the conductive ferrite has resistance, one skilled in the art would recognize that such a modification would produce an inductor with a series resistance forming another "leg" of a resistor divider network (i.e. an obvious consequence) in removal of the noise.

Response to Arguments

6. Applicant's arguments with have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

a. Naito et al. United States Patent No. 5,173,670 shows in figure 1 that an "L" configuration is equivalent to a pi configuration low pass filter.

b. Devoe et al. United States Patent No. 6,366,443 discloses that D case capacitors are primarily used in computers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Justin P. Bettendorf whose telephone number is (703) 308-2780. The examiner can normally be reached on 6:00-3:30 (M-F, 1st Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert J. Pascal can be reached on (703) 308-4909. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

Justin P. Bettendorf
Primary Examiner
Art Unit 2817

jpb
January 7, 2003